

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY PROGRAMS**

P.O.BOX 10009

Richmond, VA 23240-0009

Subject: GUIDANCE DOCUMENT 01-2024, Amendment #1

Clarification of Statistical Inventory Reconciliation (SIR) Release Detection
Guidance for Underground Storage Tanks

To: Regional Directors

From: Ellen Gilinsky, Ph.D., Director



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Copies: Regional Storage Tank Program Managers, Fred Cunningham, John Giese,
Russ Ellison, James Barnett

Summary:

Section 2.1.1.1 of the Virginia DEQ Storage Tank Program Technical Manual, Third Edition, October 4, 2001 is being amended by this guidance to clarify the language on Statistical Inventory Reconciliation (SIR). SIR is an allowable option of release detection under the Virginia regulation entitled Underground Storage Tanks: Technical Standards and Corrective Action Requirements 9 VAC 25-580. However, the existing SIR language can be interpreted such that a SIR result of failure would in certain instances not require reporting as a suspected release. This guidance clarifies that a SIR failure result is to be reported as a suspected UST release in all instances. The next version of the Manual will contain this amended section.

Electronic Copy:

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET, and for the general public on DEQ's website at: <http://www.deq.virginia.gov/>.

Contact information:

Please contact Russell P. Ellison at (804) 698-4269 or email: rpellison@deq.virginia.gov should you have any questions concerning this guidance.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

Statistical Inventory Reconciliation (SIR) Guidance for Underground Storage Tanks - Supersedes Section 2.1.1.1 of the Virginia DEQ Storage Tank Program Technical Manual, Third Edition, October 4, 2001

Releases Suspected by Statistical Inventory Reconciliation

Statistical inventory reconciliation (SIR) is a method that tank owners and operators may use to meet the release detection requirements of the UST Technical Regulation. SIR is considered an "other method" of release detection, not a type of inventory control (§ 160.H). Failed SIR results, like all other non-inventory control release detection methods that indicate a release must be reported to DEQ within 24 hours unless a monitoring device is found to be defective, repaired, replaced, or re-calibrated immediately, and additional monitoring does not confirm the initial result (§ 190.3.a). After a suspected release is reported, the tank owner/operator must: (1) begin release investigation and confirmation to determine if a release has occurred; and (2) submit a release investigation report to DEQ.

An "inconclusive" SIR result means that the attempt to perform release detection for the tank during that month failed to meet regulatory requirements. The tank owner must immediately investigate to determine the cause of the inconclusive result and immediately correct the situation as described below.

Vendors performing SIR sometimes attribute inconclusive SIR results to improper stick readings. SIR results that were inconclusive because of persons using incorrect procedures to collect data do not have to be reported to DEQ the first month that the test was inconclusive. Tank owners/operators are expected to use appropriate data collection techniques and take corrective measures to prevent the further use of erroneous data collection procedures. If SIR results for the following month are inconclusive, the tank owner/operator must report a suspected release to DEQ.

Upon receiving the first "inconclusive" SIR result, the tank owner/operator must: (1) immediately consult their SIR vendor to assess the possible causes for the inconclusive test result; and (2) make the changes recommended by the SIR vendor (i.e., change sticking practices, calibrate meters, etc.) to reduce the possibility of having future inconclusive SIR results. The DEQ Storage Tank Program will, as a matter of practice, require tank owners/operators to perform a release investigation to determine if the tank is leaking when:

1. SIR results for two consecutive months are inconclusive; or
2. There are three inconclusive SIR results during any six month period.